

Mainstreaming of Climate Risks and Opportunities in the Financial Sector

# Results of October 2009 expert elicitation on climate change related litigation risks

Technical paper

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## Summary

The main result of the October 2009 expert elicitation on climate change related litigation risks is an expected increase of claims frequency both for damage directly related to CO<sub>2</sub> / GHG emissions and for damage indirectly caused by climate change. Among those experts who think that these claims are basically possible to grant, the majority expects the first successful claims to occur within the next six years.

The most promising concept claiming direct climate damages proved to be public nuisance, according to the experts' evaluations. The proof of causality is rated to be the highest hurdle for plaintiffs in the case of damages claims, with the evaluation of the extent of liability coming second. If overcoming the hurdles is thought to be basically possible, the experts envisage this to happen relatively soon.

For damage indirectly caused by climate change, the experts think that the number of claims will increase most for claims based on the breach of duty to inform and report. Even though this kind of claims has only a low to moderate relevance for the insurance business today, experts expect a much higher relevance in 2020. Due to this a rise in demand for adequate insurance products is predicted.

## Imprint

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# 1 Introduction

In the light of the financial, energy and climate crises an era for the next great transformation has begun. The legal framework both on the national and international level is changing. Due to this there are many uncertainties, one being the future development of climate change related litigation risks for companies and the question, whether these risks are insurable for (re)insurers. What are the remaining legal hurdles for successful suits and when will they fall? These and other issues have been analysed by Germanwatch within the project consortium "Mainstreaming of climate risks and opportunities in the financial sector" ([www.climate-mainstreaming.net](http://www.climate-mainstreaming.net)), which is funded by the German Ministry of Education and Research.

Since data from the past cannot be used to judge about the likelihood of climate change related litigation risks, their future development is very difficult to predict. For problems under high uncertainty, tools based on expert judgement have proved to be very helpful. But since climate litigation is still a rather specialized field, the number of people that can be involved is quite limited. Notwithstanding these difficulties the requested knowledge can be generate by using a method that has been further developed within the project and is based on pertinent empirical social research – online based expert elicitations.

In October 2009 an expert elicitation was conducted using the online elicitation tool PCXquest, developed in the "Climate Mainstreaming" project. The PCXquest has been developed by the Potsdam Institute for Climate Impact Research<sup>1</sup> – one of the project partners. All together 32 experts participated in the survey, which could be done in German or English. The ten questions to be answered were divided according to the types of damages that can be identified in relation to climate change. At first, damages directly related to impacts of CO<sub>2</sub> / GHG emissions were considered, differentiating thereby between claims for injunctive relief and damage claims. Secondly, damage indirectly caused by climate change was the subject of questions. In this case, claims for damages have been analysed separately for different breach of duties. The survey closed with questions on the relevance of these claims for the insurance business.

Since experts opinions can change over time, triggered by new information, legislation amendments and court decisions, it would make sense to repeat the survey on a regular basis. By doing so, systematic changes in the evaluations can be traced.

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<sup>1</sup> The survey data were managed by Markus Fucik (University Potsdam/Potsdam Institute for Climate Impact Research), who stewarded the survey technically.

## 2 Concepts

The concepts employed in the survey will be explained briefly in this section.

There are basically two types of damages that can be identified in relation to climate change – damages directly caused by climate change arising from greenhouse gas (GHG) emissions and losses indirectly related to climate change.

Deterioration of land as a result of sea level rise or property damage due to increasing frequency of natural catastrophes are examples for damage that could be *directly caused by CO<sub>2</sub> emissions and other GHGs*. Therefore, companies with high GHG emissions are faced with two potential litigation risks: on the one hand lawsuits aimed at injunction relief (e.g. reduction of CO<sub>2</sub> / GHG emissions); on the other hand claims for damages.

*Claim for damages:* The aggrieved party sues the insurer, or the guilty or negligent party in order to obtain compensation for a certain damage or loss.

*Claim for injunctive relief:* The court is asked to order the performance or the prohibition of some act, hence its judicial authority to remedy a grievance is required.

Damages caused by professional negligence or the breach of a duty to warn, inform, report etc. are examples that might be *indirectly related to climate change*. In these cases the risk of a law suit for damages exists. For instance, weather-related property damage to buildings could entail claims for damage against architects for neglecting their duty to advise and indicate. Falling stock prices, if attributable to inadequate management of climate risks, are another example of damage indirectly related to climate change. Shareholders might proceed against managers or the board of a company, who neglected their duty to care (e.g. by not having prevented the company from legal sanctions or vulnerability to rising CO<sub>2</sub> prices) or their duty to inform the shareholders about the existing risks. Furthermore, the financial sector is exposed to litigation risks in so far as it does not follow its duty to inform and report, according to which it may have to disclose the risks it faces from climate change and the financing of companies that contribute to climate change.

There are still a number of hurdles that plaintiffs will need to overcome to succeed in their claims. The most important ones in the case of damages directly related to climate change are justiciability, legal standing, proof of causality, legality of defendant's action and evaluation of the extent of liability. For lawsuits due to damages indirectly related to climate change, proving causality and determining the extent of liability are considered current hurdles.

*Justiciability:* With two exceptions, courts in the USA so far assumed that claims directly related to climate change, which are not based on a breach of regulation, are a problem that requires a political solution meaning that it must be solved by legislation or by the administration. For the jurisprudence hitherto see California vs. General Motors<sup>2</sup> or Kivalina vs. Exxon<sup>3</sup> (different the appellation court in Connecticut vs. American Electric Power<sup>4</sup> and Comer vs. Murphy Oil<sup>5</sup>).

*Legal standing:* Since losses caused by climate change can neither be linked to a specific injured party nor to a single causer, the question on who is entitled to claim damages is difficult to answer. See decision of the Supreme Court in Massachusetts vs. EPA of 2007.

*Proof of Causality:* Especially for damages claims proving causality is vital: it must be established that emissions by a certain defendant caused the specific loss of the specific claimant.

*Non-illegality:* If the defendants acted in compliance with all regulation, it seems doubtful, though not impossible, to hold them liable for the consequences. However, since climate change related regulation is becoming stricter, it can be expected that breaches of regulation will occur more often.

*Extent of liability:* Since climate change is a process caused by many sources, one would need to determine, in the case of damages claims, to which extent a certain defendant can be held responsible for a specific damage.

Concerning the legal concepts as basis for damages claims, a differentiation between “direct damages” and “indirect damages” is necessary. Underlying legal concepts for claims based on losses directly related to impacts of CO<sub>2</sub> / GHG emissions are inter alia public nuisance, private nuisance, conspiracy, unjust enrichment and negligence. For damages indirectly caused by climate change claims can be based on breach of duty. Different types of duties come into question, out of which groups of main breach of duties have been formed.

*Breach of duty to advise and indicate:* e.g. failed indication / advice referring to necessary climate / conditional / structural / special arrangements.

*Breach of duty of care:* e.g. insufficient management of known, business relevant climate risks.

*Breach of duty to inform and report:* e.g. failed disclosure of known business relevant climate risks or business activities damaging the climate.

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<sup>2</sup> Judgement available at:

[http://ag.ca.gov/globalwarming/pdf/California\\_GeneralMotors\\_Decision\\_Dismiss\\_2007Aug17.pdf](http://ag.ca.gov/globalwarming/pdf/California_GeneralMotors_Decision_Dismiss_2007Aug17.pdf)

<sup>3</sup> Judgement available at:

<http://climatelaw.org/cases/country/us/cases/case-documents/us/kivalina.dismissed.pdf>

<sup>4</sup> Judgement available at: <http://www.climatelaw.org/cases/country/us/case-documents/us/aep.092109.pdf>

<sup>5</sup> Judgement available at: <http://climatelaw.org/cases/country/us/case-documents/us/katrina.oct09.pdf>

### 3 Composition of participants

*Participants were asked to indicate their professional background out of the professions/areas lawyer, science, business, finance, insurance, consultant and NGO. More than one click was allowed.*

Out of the 32 participants 22 made one statement, five persons chose two of the options, one expert indicated three backgrounds. Only two participants didn't give any answer.

A proportion of about 50% of the participants are lawyers. 30% of the experts originate from science. Others reported to work in an NGO, the insurance business, the financial market and as consultant. About 60% indicated environment, liability, environmental (liability) law, climate policy and (international) climate protection law as their working area. The remaining legal experts came from areas like risk management, sustainable investments and reinsurance amongst others (see table 3.1).

Professional background	Number of indication
Lawyer	19
Science	10
NGO	4
Insurance	2
Finance	1
Consultant	1
Business	0

**Tab. 3.1: Distribution of answers on experts' professional background**

*Participants were asked to make an own specification on their respective area of work, the results have been the following:<sup>6</sup>*

Environment (7) / liability law (3) / environmental liability law (1) / environmental law, liability law and risk regulation (1) / just law, corporate law, liability and (environmental) human rights (1) / climate change law (1) / climate law (1) / international climate protection law (1) / climate policy (2) / climate change policy think tank (1) / climate change (1) / environmental issues in transactions (1) / sustainability risk management (1) / sustainable investments (1) / environmental economics (1) / insurance and reinsurance law (1) / insurance and liability (1) / no statement (6) (see table 3.2 in aggregate answers).

<sup>6</sup> In 15 cases the statement was given in German.

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Area of work	Number of indications
Liability (law), environmental law (rights), environmental liability law	9
Climate (change) law, international climate protection law, climate policy, (think tank), climate change	7
Environment	7

**Tab. 3.2: Indications on experts' area of work**

## 4 Results

### 4.1 Development of claims directly related to GHG emissions

Experts were asked whether the number of claims for injunctive relief and claims for damages was going to increase until 2020. Participants were required to express their opinion on a scale of 0 to 4, with following meaning: 0 = no change, 1 = rather slight increase, 2 = rather moderate increase, 3 = rather strong increase, 4 = very strong increase.

On average the experts expected a rather moderate to strong increase of the frequency of claims directly related to climate change by 2020. The two types of claims show a very similar mean, but different distribution of answers. Whereas in the case of claims for injunctive relief opinions were nearly equally distributed between the options “rather slight”, “rather moderate”, “rather strong” and “very strong”, on damages claims there had been two focuses. The largest group of experts expected a rather small increase of the number of claims and the second largest group counted for a very strong increase. None of the experts indicated to envisage no change at all. The question was answered by 29 experts in total (see table 4.1 und figure 4.1).

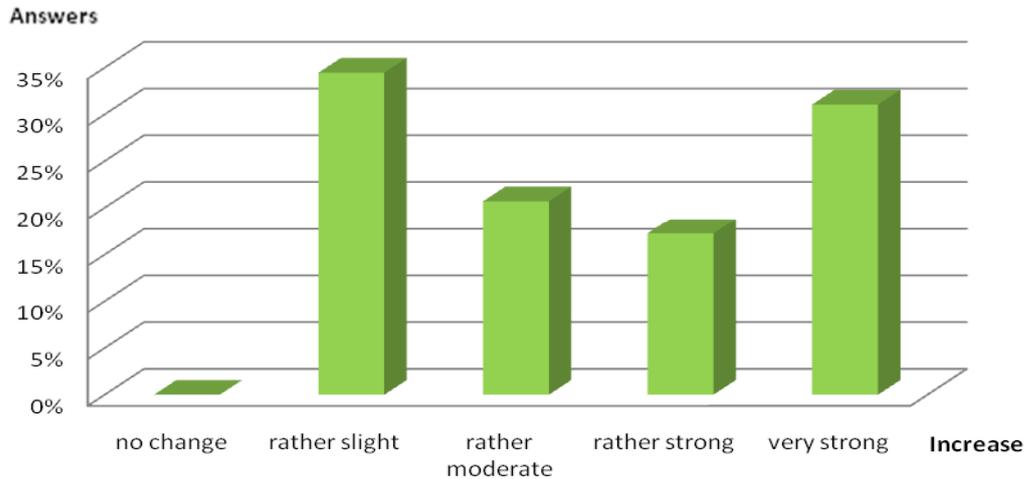
Increase	Injunctive relief	Damages
No change (0)	1	0
Rather slight (1)	7	10
Rather moderate (2)	8	6
Rather strong (3)	6	4
Very strong (4)	7	9
Mean <sup>7</sup>	2,38	2,41
Mode <sup>8</sup>	2	1
Median <sup>9</sup>	2	2

Tab. 4.1: Distribution of answers on development of claims frequency up to 2020

<sup>7</sup> Mean: mathematical average of a set of numbers, also called arithmetic mean

<sup>8</sup> Mode: value that was chosen most often

<sup>9</sup> Median: value in the middle of the distribution i.e. 50% of the values are lower than the median and 50% are higher



**Fig. 4.1: Development of claims frequency for damages up to 2020**

Further the participants of the survey were asked to give their assessment on whether damages claims would be successful between now and 2020. A specific year had to be stated in which they expected the first claim to be successful. If they didn't expect any such successful claim until 2020 they could choose 0.

A number of 26 experts answered this question. 73% of these thought that successful claims for injunctive relief are basically possible, and quoted thus a number other than 0. On average the experts expected the first successful claims for injunctive relief to happen around the year 2014. The year cited most was 2012. One half of the experts who thought that successful claims were possible in the future expect this to happen before 2013. 80% out of these foresee the first successful claims for injunctive relief to take place up to and including 2015. A proportion of 95% believe that these claims will be successful up to and including 2020 (see table 4.2).

2009	2010	2011	2012	2013	2014	2015	2018	2020	2035
1	3	2	4	2	1	2	1	2	1
<b>Mean</b>	<b>Mode</b>	<b>Median</b>	<b>No success</b>						
2014,3	2012	2012	7						

**Tab. 4.2: Distribution of answers on year of first successful claims for injunctive relief**

For damages claims 18 out of the 26 participating experts (69%) chose a value other than 0, indicating that they expect these claims to be successful within the proposed timeframe. The mean for damages claims is slightly higher than for claims for injunctive relief, namely 2015. Again it is influenced by an outlier. The year stated by most of the experts (33%) is 2011. Two thirds of the experts, who think that successful claims are possible, expect this to happen up to and including 2015. 89% believe that this will already have happened by 2020 (see table 4.3).

2010	2011	2012	2014	2015	2018	2020	2025	2030
1	6	1	1	3	1	3	1	1
Mean	Mode	Median	No success					
2015,6	2011	2014,5	8					

**Tab. 4.3: Distribution of answers on year of first successful claims for damages**

## 4.2 Legal hurdles for claims directly related to GHG emissions

*In view of present hurdles for plaintiffs the question posed was: To what degree are justiciability, legal standing, causality, non-illegality and difficulties in regard to evaluating the extent of liability a present hurdle? For each combination of type of claim and type of hurdle a number between 0 and 4 had to be chosen. Their meaning was as follows: 0 = no hurdle, 1 = rather small hurdle, 2 = medium-sized hurdle, 3 = rather large hurdle, 4 = very large hurdle.*

Out of the 32 participating experts in the online elicitation 30 gave an answer to this question. For both types of claims the hurdles have in average been estimated to be between "rather medium-sized" and "rather large". The largest hurdle for both was estimated to be the proof of causality, with extent of liability being the second largest hurdle.

In the case of injunctive relief the proof of causality was evaluated by 19 of the 30 experts (63%) as being a "rather large" or "very large" hurdle, whereas the "very large" was chosen by 11 experts (37%) (see table 4.4 and 4.5).

Rank	Hurdle	Mean
1	Proof of causality	2,73
2	Extent of liability	2,17
3	Justiciability	2,10
4	Non-illegality	2,07
5	Legal standing	2,03

**Tab. 4.4: Ranking of present legal hurdles for injunctive relief (descending)**

Height of hurdle	Proof of causality	Extent of Liability	Justiciability	Non-illegality	Legal standing
<b>None (0)</b>	2	4	4	2	1
<b>Rather small (1)</b>	4	5	7	9	8
<b>Rather medium-sized (2)</b>	5	9	5	8	13
<b>Rather large (3)</b>	8	6	10	7	5
<b>Very large (4)</b>	11	6	4	4	3
<b>Mode</b>	4	2	3	1	2
<b>Median</b>	3	2	2	2	2

**Tab. 4.5: Distribution of answers on height of present legal hurdles and average values for injunctive relief**

For damages claims the hurdles are considered slightly higher than for injunctive relief. More than half of the experts consider the proof of causality a “very large” hurdle. 70% see it as a “large” or “very large” hurdle (see tables 4.6, 4.7 and figure 4.2).

Rank	Hurdle	Mean
1	Proof of Causality	3,03
2	Extent of liability	2,50
3	Non-illegality	2,20
4	Legal standing	2,13
5	Justiciability	2,00

Tab. 4.6: Ranking of present legal hurdles for damages (descending)

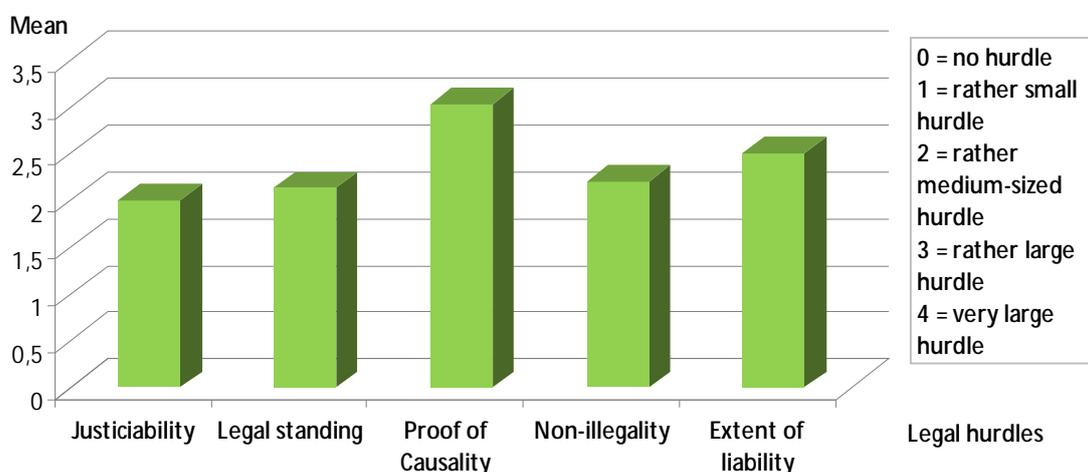


Fig. 4.2: Present legal hurdles for damages

Height of hurdle	Proof of causality	Extent of liability	Non-illegality	Legal standing	Justiciability
None (0)	1	2	1	1	5
Rather small (1)	3	5	10	10	7
Rather medium-sized (2)	5	7	7	7	5
Rather large (3)	6	8	6	8	9
Very large (4)	15	8	6	4	4
Mode	4	3 and 4	1	1	3
Median	3,5	3	2	2	2

Tab. 4.7: Distribution of answers on height of present legal hurdles and average values for damages

*On the issue of overcoming the legal hurdles 23 experts shared their estimate with us. The experts, who believed that the different hurdles for claims for injunctive relief or damages claims in the context of damage directly related to CO<sub>2</sub> / GHG emissions were going to fall, were asked to indicate a point in time when they approximately expect this to happen. Separately for each type of claim and for each legal hurdle, a year could be stated. In case they didn't envisage a certain hurdle to fall, 0 was to be chosen.*

Overcoming the hurdles seems probable for a proportion of 65%-83% depending on the hurdle and claim. The vast majority of these experts expects the hurdles to fall up to and including 2015 – a proportion of 79%-88% for claims for injunctive relief and 67%-82% for damages claims. For both types of claims experts are most optimistic about the fall of the hurdle justiciability and envisage this to happen the earliest. 88% and respectively 81% expect this to happen up to and including 2015.

The median (mean) for the proof of causality, which appeared to be the biggest hurdle, was (just under) the year 2014 for claims for injunctive relief and one year later, meaning 2015, for damage claims (see tables 4.8 and 4.9).

The year 2010, as the year when the first successful claims are expected to happen, was cited most for all hurdles. Approximately 75% of all experts believe that the proof of causality which was indicated to be the largest hurdle in the previous question, will fall. All of these expect this to happen up to and including 2020. Regarding the second largest hurdle – evaluation of the extent of liability – 78% envisage its overcoming on a basic principle. 60% of these expect this to happen already up to and including 2013 (see table 4.8).

Years chosen	Justiciability	Legal standing	Proof of causality	Non-illegality	Extent of liability
<b>2009</b>	3	3	0	0	1
<b>2010</b>	4	4	4	5	4
<b>2011</b>	2	1	3	1	3
<b>2012</b>	0	0	1	2	2
<b>2013</b>	1	0	0	1	1
<b>2014</b>	1	1	2	1	1
<b>2015</b>	4	3	4	5	3
<b>2018</b>	0	1	0	1	0
<b>2020</b>	2	1	3	2	2
<b>2030</b>	0	0	0	1	1
<b>2035</b>	0	1	0	0	0
<b>No overcoming</b>	6	8	6	4	5
<b>Mean</b>	2012,7	2014	2013,7	2014,5	2013,8
<b>Mode</b>	2010, 2020	2010	2010, 2015	2010, 2015	2010
<b>Median</b>	2011	2011	2014	2014	2012

**Tab. 4.8: Distribution of answers on year of the fall of legal hurdles for injunctive relief**

The estimates on the previously indicated hurdles were the following. For the proof of causality, 65% of the 23 participating experts think that this legal hurdle will fall in the future. All of them envisage this to happen up to and including 2020. The fall of the hurdle extent of liability was expected by 70% of the experts (see table 4.9).

Years chosen	Justiciability	Legal standing	Proof of causality	Non-illegality	Extent of liability
2009	3	3	0	0	0
2010	4	5	1	2	1
2011	4	1	3	2	3
2012	1	1	3	3	2
2013	0	0	0	1	0
2014	0	0	0	1	1
2015	2	2	3	3	5
2018	0	1	2	1	1
2020	3	2	3	3	2
2022	0	0	0	0	1
2025	0	1	0	0	0
No overcoming	6	7	8	7	7
Mean	2012,5	2013,3	2014,7	2014,3	2014,8
Mode	2010,2011	2010	2011, 2012, 2015, 2020	2012, 2015, 2020	2015
Median	2011	2010,5	2015	2013,5	2015

Tab. 4.9: Distribution of answers on year of the fall of legal hurdles for damages

### 4.3 Legal concepts as a basis for damages claims directly related to GHG emissions

The question posed was how promising the participants thought a certain number of legal concepts are as a basis for damages claims. Public nuisance, private nuisance, conspiracy, unjust enrichment and negligence were up to evaluation. Again, they had to choose out of the numbers 0 to 4, which stand for: 0 = not promising, 1 = rather little promising, 2 = rather moderate promising, 3 = rather promising, 4 = very promising.

Among the possible concepts as a basis for damages claims, public nuisance was predicted to be most promising. Out of the 23 participants about 60% believe this concept is promising or very promising. The evaluation most often chosen was “very promising”. Negligence came second place. Interestingly, opinions on this concept differ strongly. The two focuses lie on “rather little promising” and “very promising”. The experts evaluated the concept of unjust enrichment to be the least promising; three fourth thought it was “not promising” or only “rather little promising” (see tables 4.10 and 4.11).

Rank	Legal concept	Mean
1	Public nuisance	2,5
2	Negligence	2,4
3	Private nuisance	2,0
4	Conspiracy	1,3
5	Unjust enrichment	1,1

Tab. 4.10: Ranking of legal concepts for damages

Potential success	Public nuisance	Negligence	Private nuisance	Conspiracy	Unjust enrichment
Not promising (0)	4	1	4	5	6
Rather little promising (1)	2	8	3	10	12
Rather moderate (2)	3	3	8	5	2
Rather promising (3)	6	3	4	2	3
Very promising (4)	8	8	4	1	0
Mode	4	1 and 4	2	1	1
Median	3	2	2	1	1

Tab. 4.11: Distribution of answers on legal concepts and average values

#### 4.4 Development of damages claims indirectly related to climate change

Just like for “direct” climate damages, experts were asked whether they expect claims in relation to damage indirectly caused by climate change to increase until 2020. Three groups of breach of duty were distinguished as potential basis for claims and were thus to evaluate, namely duty to advise and indicate, duty of care, duty to inform and report. By a number between 0 and 4 experts could give their estimate on each type of duty separately. Numbers were attributed the following meaning: 0 = no change, 1 = rather slight increase, 2 = rather moderate increase, 3 = rather strong increase, 4 = very strong increase.

The 27 experts who answered this question expect an increase of frequency of claims for all three groups of duties. Again experts believe that there will be on average a moderate to strong increase until 2020. The strongest increase they expected for claims on the basis of the breach of duty to inform and to report. Two thirds estimate the rise to be “rather strong” or “very strong”. The breach of duty of care came second and the breach of duty to advise and indicate came third place. Remarkable is the fact that the evaluation chosen most by the experts was “rather strong” for all three groups (see table 4.12 and figure 4.3).

Increase	Duty to report and inform	Duty of care	Duty to advise and indicate
<b>No change (0)</b>	2	2	3
<b>Rather slight (1)</b>	2	5	2
<b>Rather moderate (2)</b>	5	4	9
<b>Rather strong (3)</b>	10	11	11
<b>Very strong (4)</b>	8	5	2
<b>Mean</b>	2,74	2,44	2,26
<b>Mode</b>	3	3	3
<b>Median</b>	3	3	2

Tab. 4.12: Distribution of answers on development of claims frequency up to 2020

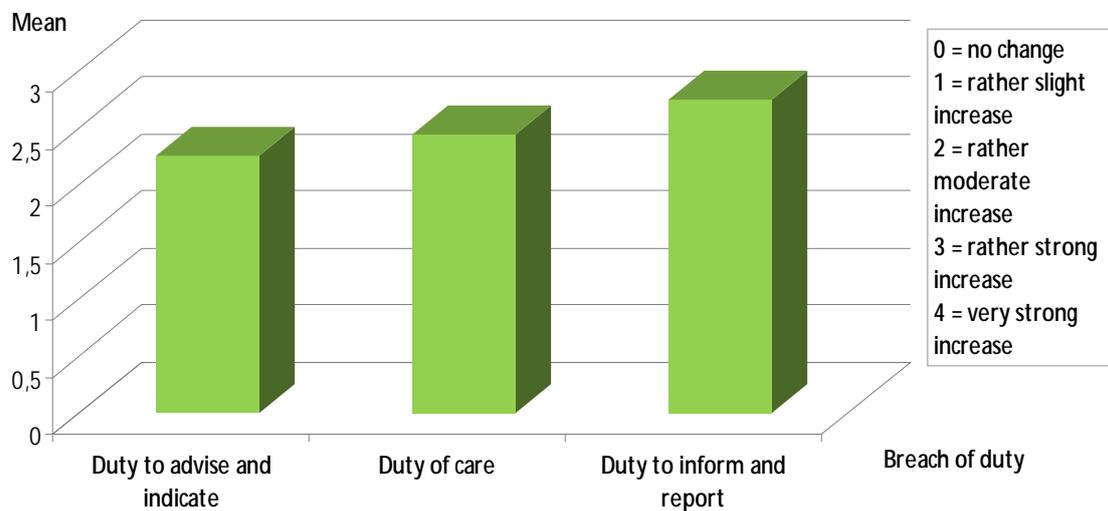


Fig. 4.3: Development of claims frequency up to 2020

#### 4.5 Legal hurdles for damages claims indirectly related to climate change

Experts were asked to what degree the proof of causality and problems when evaluating the extent of liability were a hurdle for successful damages claims at present. One could choose for each hurdle a value between 0 and 4, with the following meaning: 0 = no hurdle, 1 = rather small hurdle, 2 = medium-sized hurdle, 3 = rather large hurdle, 4 = very large hurdle.

Similar to the results for “direct damages claims” experts saw a slightly larger hurdle in proving causality than determining the extent of liability. Both were estimated to be a “rather large hurdle” by the participating experts. Two thirds of the experts evaluated the proof of causality as a “rather large” and “very large” hurdle; 54% did so for the extent of liability. The value most often chosen for both hurdles was 4 (see table 4.13).

Height of hurdle	Proof of causality	Extent of liability
<b>None (0)</b>	1	0
<b>Rather small (1)</b>	2	4
<b>Rather medium-sized (2)</b>	6	9
<b>Rather large (3)</b>	7	4
<b>Very large (4)</b>	12	11
<b>Mean</b>	3	2,8
<b>Mode</b>	4	4
<b>Median</b>	3	3

**Tab.4.13: Distribution of answers on height of legal hurdles and average values for damages**

*In case the participants believed that the legal hurdles can be overcome, they were asked to state the year when approximately they expected this to happen. Separately for each type of duty and for each type of hurdle a year had to be indicated, meaning that all combinations of the two legal hurdles concerning causality and extent of liability with the tree groups of duties – duty to advise and indicate, duty of care, duty to inform and report – were to be analysed. If experts didn’t expect one of the hurdles to fall they had the possibility to symbolize this by choosing 0.*

For both hurdles less than 30% of the 23 participants think that they won't be overcome. Compared to the results on “direct climate damages”, the experts are slightly more optimistic that the hurdles for damages claims fall in the case of “indirect climate damages” (for direct climate damages proportions had been 35% for causality and 30% for extent of liability). Out of those who envisage a fall, 72% expect this for both hurdles to happen up to and including 2015. The average point in time stated for both hurdles was the year 2015. But the year most stated differs – being 2011 for the proof of causality, and 2012 for extent of liability (see table 4.14).

Years chosen	Causality	Extent of liability
2009	1	1
2010	1	1
2011	4	3
2012	3	4
2013	0	1
2014	1	0
2015	3	2
2018	0	1
2020	2	2
2025	2	1
2030	1	1
No overcoming	5	6
Mean	2015,4	2015,1
Mode	2011	2012
Median	2013	2012

Tab. 4.14: Distribution of answers on year of the fall of legal hurdles for damages

#### **4.6 Relevance of damages claims indirectly related to climate change for the insurance business**

*To assess the present and future (in 2020) relevance of damages claims indirectly related climate change for the insurance business, experts were asked to indicate a number between 0 and 4 separately for each type of duty. 0 = no relevance, 1 = rather low relevance, 2 = rather moderate relevance, 3 = rather high relevance, 4 = very high relevance.*

The three groups of the breach of duty have a low to moderate relevance for the insurance business at present, according to the 26 experts who answered the question. The breach of duty to inform and report has been given a slightly higher relevance on average than the others (see table 4.15).

Relevance	Duty to report and inform	Duty of care	Duty to advise and indicate
<b>None (0)</b>	4	4	3
<b>Rather low (1)</b>	7	11	12
<b>Rather moderate (2)</b>	9	6	6
<b>Rather high (3)</b>	5	3	4
<b>Very high (4)</b>	1	2	1
<b>Mean</b>	1,69	1,54	1,54
<b>Mode</b>	2	1	1
<b>Median</b>	2	1	1

**Tab. 4.15: Distribution of answers and average values on relevance of duties for the insurance business at present**

The estimations for the year 2020 are indeed much higher. The average value increases by one evaluation level. Claims for damages based on the three types of breach of duty are expected to have a moderate to high relevance in 2020. Again, the highest relevance will be held by the duty to inform and report, according to the experts. About 60% of the experts believe that they will be of a “rather high” or “very high” relevance. None of the experts expect that the breach of duty will have no relevance at all (see table 4.16).

Relevance	Duty to report and inform	Duty of care	Duty to advise and indicate
<b>None (0)</b>	0	1	1
<b>Rather low (1)</b>	2	3	2
<b>Rather moderate (2)</b>	9	10	13
<b>Rather high (3)</b>	7	5	4
<b>Very high (4)</b>	8	7	6
<b>Mean</b>	2,81	2,54	2,46
<b>Mode</b>	2	2	2
<b>Median</b>	3	2	2

**Tab. 4.16: Distribution of answers and average values on relevance of duties for the insurance business in 2020**

*The final question to be answered was whether the participants thought that the demand for insurance products related to climate change and for specific climate change policies for damages indirectly caused by climate change would increase. The options given were “yes” or “no”.*

All 28 participating experts affirmed the question (see table 4.17).

Yes	No
28	0

**Tab. 4.17: Answers on increase of demand for climate change related insurance products**

## 5 Outlook

The results of the elicitation indicate that the role of climate change related litigation risks are going to increase in the future. Most of this is expected to happen up to and including 2015.

The quantitative assessment of the results points to the necessity for companies and insurers to react on the rising litigation risk. Options for companies might be to minimize their exposure to this risk by adapting their strategies or to insure themselves against it where possible. Increasing climate litigation risks might evoke different reactions in the insurance industry. On the one hand, existing premiums would need to be adjusted to the higher risks, and the increasing demand for special climate change related products is to be met. On the other hand, risks could lead to reduced coverage, respectively no offer in the specific branch, in cases where the risk of clients to be sued for very large amounts of damages becomes unmanageable.

Forthcoming, a briefing paper on climate change related litigation risks will be published by the “Climate Mainstreaming” project. It presents the legal issues and implications of the elicitation results for the insurance industry:

*Roderick, Peter (2009): Expert elicitation on climate change related litigation risks: issues and implications. Climate Mainstreaming (ed.), Bonn.*

It can be downloaded from the “Climate Mainstreaming” website at:  
<http://www.climate-mainstreaming.net/litriskbp.htm>





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